

## Paul Henry LeBlond



*The all-around scientist Paul, in different roles at various PICES meetings: presenting a paper at the scientific session, introducing the POC Best Presentation Award and leading a discussion at the POC business meeting.*

Paul LeBlond has made a tremendous contribution to PICES since its inception. Besides attending every PICES annual meeting, he was a member of the Physical Oceanography and Climate Committee (POC) from the beginning and chaired that committee from 1996-1998. Paul co-chaired Working Group 7 on “Modeling the Subarctic North Pacific Circulation,” which reviewed the status of physical modeling efforts in the North Pacific and identified the kinds of observations and information that would be needed to improve circulation models. This work proved valuable in providing advice and direction to the PICES Climate Change and Carrying Capacity Program’s MODEL Task

Team, of which Paul was also a member. He served one year on the PICES Publication Study Group, which has now evolved into a standing committee to advise Science Board on publication and translation matters. He is presently a member of the scientific steering committee for the upcoming Beyond El Niño conference that has engendered the support of many international organizations and will prove to be one of the most scientifically stimulating conferences on climate variability and ecosystem impacts to be held in recent years. Paul has been a strong leader in the PICES scientific community, stimulating productive scientific debate among its members, and giving us good directions for the future. Although PICES is losing his leadership after his retirement, we hope to gain his continued participation in PICES scientific endeavors, now and in the future.

This article is published in appreciation and recognition of Paul’s outstanding service to PICES over many years. We hope that the following two essays, along with a brief biography published in the previous issue of PICES Press (Vol. 7, No. 1), give our readers a reasonably complete portrait of Paul.

*Dr. Richard Thomson (thomsonr@dfo-mpo.gc.ca), Head of Local Dynamics and Processes Section at the Institute of Ocean Sciences (Sidney, B.C.) was Paul’s Ph.D. student at the University of British Columbia (UBC) and has considerable collaborative research experience with Paul. His essay focuses mostly on scientific achievements of Paul.*

*Dr. Louis Druehl (ldruehl@mail.island.net) is Professor of Marine Botany at Simon Fraser University and now works at the Bamfield Marine Station.(Vancouver Island, B.C.). Paul and Louis were Ph.D. students in Oceanography at UBC at the same time, and continue to socialize, enjoy their friendship and share common interests. Louis’ notes provide a “historical view” on Paul’s scientific and social life.*



*Drs. Yutaka Nagata and Paul LeBlond, the first and the second Chairmen of POC at PICES IV in Qingdao, October 1995.*

## A tribute to the scientific accomplishments of Paul H. LeBlond

One way to describe the impact of a scientist's work is through an annotated chronology of their publications. The approach is informative, but dry and uninteresting. A less formal approach is to ask the scientist to list what he or she considers his other most salient contributions, with some indication of why these particular contributions are important. When I confronted Paul LeBlond with this question during a recent meeting we were attending, he hesitated briefly and then listed off a series of publications that he considered his "most satisfying scientific achievements". Research publications that provide a sense of satisfaction, a feeling of "eureka!", regardless of how infrequently the effort might be cited by your peers.

It is perhaps not surprising that his well-known book "Waves in the Ocean", co-authored with Lawrence Mysak, was not at the top of his list. Books are challenging, difficult to write, and help solidify a scientist's reputation internationally, but they do little to lift one's spirit or challenge the intellect in the manner of a primary journal publication. Paul's work on tidal propagation in a river (LeBlond, 1978, 1979, 1981) is near the top of his list. It took him a year of arduous perturbation analysis before he finally realized that his approach was wrong and that the advance of tides up a river channel should be viewed in terms of an elliptical *diffusion* equation rather than a hyperbolic *wave propagation* equation. Paul is equally proud of the papers he wrote (with David Griffin and me) on the estuarine exchange of heat and salt between the southern Strait of Georgia and Juan de Fuca Strait (Griffin and LeBlond, 1990; LeBlond, Griffin and Thomson, 1994). Fortnightly hydraulic control within coastal tidal channels had been studied before, but Paul's co-authored work presented the first predictive model that accounted for the effects of all dominant factors – including tidal currents, winds, and runoff - that control the estuary/ocean. Paul also likes the work he did on the formation of spiral beaches (LeBlond, 1973, 1979, 1980; Bremner and LeBlond, 1974). "What I like about this is the interaction between waves and sedimentology in shaping the coastline. Waves shape the coastline which in turn affects wave propagation through refraction and diffraction..."

After some prodding, Paul acknowledged the widespread use that has been made of his theoretical work with Lin Jiang on tsunami generation by viscous underwater landslides (Jiang and LeBlond, 1992, 1994) and on other aspects of tsunami generation (King and LeBlond, 1982; Dunbar, LeBlond and Murty, 1989; Ng, LeBlond, and Murty, 1990). Tsunami generation and run-up are serious subjects of ongoing research and Paul's series of papers form a cornerstone of much of the modern research being conducted on landslide-generated tsunamis in vulnerable coastal communities in Norway, Alaska and British Columbia. A relatively little known corner of Paul's considerable investigative ability was his study of

gas bubbles "where I was pleased to find some general formulation which related gas and fluid properties to the fate of rising bubbles". Finally, I have the honour of having worked with Paul LeBlond on his last major project, the Canadian WOCE drifter program, prior to his retirement from Earth and Ocean Sciences at UBC, a department that he was instrumental in launching. The WOCE field program ended more than 5 years ago but we are still analyzing and interpreting the data from that program for publication. Although Paul no longer writes science-funding proposals, he remains a highly active member of the scientific community, a strong proponent for the rationale use of our diminishing coastal heritage, and an advocate for the more serious aspects of cryptozoology.

In closing, I would like to emphasize that Paul was foremost an educator who treated his students as equals, despite the sometimes obvious differences in intellect and ability. Paul may be the last of the renaissance men. He is fully bilingual in English and French. When he was going to work with Russian scientists, he learned Russian. Before going to visit Cuba, he learned Spanish. He learned German during his sabbatical year to Germany. Paul is also a damn good athlete. I may be a superior soccer player but Paul could skate circles around me on the hockey rink. He was a great person to have as a graduate supervisor and continues to contribute unselfishly at several levels of community participation. The last word goes to Paul: "The greatest enjoyment of a research career for me has been the interaction with graduate students. In some cases, they worked on my ideas. In many others, they brought their own ideas and I learned as much from them as they from me."

*Richard Thomson*

### Publications referenced

#### *Estuary/Ocean Interaction*

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#### *Spiral Beaches*

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### *Tsunami Problems*

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Dunbar, D.D., P.H. LeBlond and T.S. Murty, 1989. Maximum tsunami amplitudes and associated currents on the coast of British Columbia. *Science of Tsunami Hazards*, 7, 3-44.

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Jiang, L. and P.H. LeBlond, 1992. The coupling of a submarine slide and the surface waves which it generates. *J. Geophys. Res.* 97, C8, 12,731-12,744. and other papers with Lin Jiang.

### *Gas Bubbles*

LeBlond, P.H., 1969. Gas diffusion from ascending gas bubbles. *J. Fluid Mech.*, 35, 711-719.

## Notes on Paul

Paul Henry LeBlond attended McGill University where he studied physics with a subliminal inclination to meteorology. During this period he was active in the Reserve Officers Training Corps (ROTC), specializing in radar and managing to get grounded for sneaking a lady friend (later to become his wife) into the officers' mess.

Paul's passage through University of British Columbia graduate studies was smooth and swift. Like many physical oceanographers before him, he was able to cope with the tricky quirks of nature by applying standard assumptions (such as friction-less, bottom-less, and boundary-less) to resolve the physical nature of the Arctic Ocean. His graduate career did have some interruptions, such as a broken pencil during a particularly profitable cognitive period or a desperate call to his stock broker to bail out his National Research Council scholarship from some moose pastures mine stock.

A loose-knit floppy sweater, pulled up over forearms, glasses floating somewhere between nose and forehead, and a thoughtful smile are an unpretentious but authoritative Paul. Whence evolved this charming professor? Paul has always been friendly, good-natured, and easy-going; all characteristics shared with his father. The quaint milieu of his graduate studies and earlier academic years influenced him as well. The UBC Institute of Oceanography was housed in freezing/boiling, rat infested W.W.II army barracks that cuddled and cozied preening academics and at the same time herded them to unconventional (for the 1960's) sociability. Faculty (including physical oceanographers Robert Stewart, Ronald Burling and George Pickard) and graduate students took coffee together (a big deal then!), went-a-beering Fridays, and soccered and hockeyed to crutches and revenge.

The 1960's and 70's were challenging times for aspiring academics. There were the temptations of the hippie culture and the oppression of a work ethic, inherited from parents who survived the Great Depression. Paul skirted this period with a friendly authoritative smile or a slightly more indulgent participation. He and his partner Josee hosted chicken dinners on Fridays. Always a different chicken dish followed by a large green salad. Numerous guests, academic or not, milled

throughout the house on these occasions. You did not know if you were talking to a professor, a student, an artist, or just someone who walked into the wrong party. You did know Paul and Josee's kids, Michael, Philippe, and Anne, they played the music?!

Paul is well known for his contributions to national and international oceanographic committees (e.g. Pacific Fisheries Resource Conservation Council, the Science Advisory Council of the Department of Fisheries and Oceans, Canadian Ocean Frontier Research Initiative (as President) and to numerous local boards (e.g. the Museum Society, the Access to Media Education Society). He has also taken on more onerous and politically charged tasks. In one instance, he investigated why Canada was unable to find a group of First Nation fishers, including one child, who drifted off Vancouver Island in a herring skiff for over one month. Later, Paul reviewed the functions of west coast lightkeeps. Whatever his findings were, the political decision and indecision continue to reverberate on our shores. With increasing responsibilities come increasing rewards (air miles) and honours (Fellow Royal Society of Canada).

Paul's research interests have evolved from the "pure" physical study of phenomena such as internal waves to interdisciplinary topics. For example, the influence of oceanographic conditions on fish migrations. His academic "branching out" culminated in his plunge into cryptozoology, the scientific investigation of mythical-beasts-demanding-respect. He was instrumental in forming the International Society of Cryptozoology and published in the first issue of its scholarly journal (LeBlond, P.H., 1982. An estimate of the dimensions of the Lake Champlain Monster from the length of adjacent wind waves in the Mansi photograph. *Cryptozoology* 1: 54-61).

Paul's contributions are many and varied, and Canada's place in ocean science is advanced, thanks to his efforts. To me his greatest contribution is his living demonstration of good science by a *bon vivant* with grace and humility. We expect to see much more from Paul.

*Louis Druehl*



*Paul dressed up for the ROTC Ball, Montreal, 1960.*



*Paul on a tricycle in Quebec City, age 3.5 years.*



*Paul, the graduate student, Vancouver, Christmas 1961.*



*Paul marrying off his daughter Anne in Yelapa, near Puerto Vallarta, Mexico, Nov. 5, 1997.*



*Paul, the young professor, and family (Josee, Anne, Phylippe), Vancouver, 1969.*



*Grandfather Paul with first grandchild Mika, Vancouver, April 1998.*